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EXAMINER

PRATT, HELEN F

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 03/19/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/744,681

Applicant(s)

BEN YEHUDA ET AL.

Examiner

Helen F. Pratt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12-46, 50-55 and 57-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-46, 50-55, 57-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "including" renders the claim indefinite because it is unclear what other plant matter or foodstuffs applicant is claiming.

No basis is seen in claim 22 for the limitation in claims 50-52 for "the fog". Also, the word "ration" should be – ratio –, in these claims and claim 53.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No basis is seen for the phrase "trace activator stabilizers or modifiers". See page 21 of specification. Applicant may mean, "trace element activators, stabilizers, and modifiers".

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***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, 16, 17-19, 22-25 and 27, 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin '458.

Martin discloses a process of storing crops (potatoes in particularly) and product thereof in an environment made humid by spraying from 0.5 to 20% hydrogen peroxide into the air and circulating it around the stored crops as in claims 1, 2, 5, 17-19, 22-25, 27, and 43. The amount of hydrogen peroxide (HP) is between 0.2 to 20% by weight of an aqueous solution, which is within the ranges. The crops can also be dipped into aqueous hydrogen peroxide bath as in claim 1. This process is seen to impart storage stability, and inhibit bacterial mold, fungus infection and rot in stored crops (col. 1, lines 25-56). Storage is seen to be a post harvest condition.

The method of Martin is seen to have been a continuous method as in claim 5, as the reference discloses treating the potatoes for 40 days in a relative humidity made by spraying an aqueous solution into an air stream (col. 2, lines 60-73).

Martin discloses that the potatoes can be dipped into the solution as in claim 16 (col. 4, lines 5-19).

***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 20, 21, 23-25, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (3,503,458)

Claims 3 and 4 further require that the HP treatment is intermittent treatment at varying concentrations. However, as the treatment is continuous and has good results, nothing new is seen in treating at intervals, as the microbes would be not growing for a certain time period having been killed off. Martin discloses treating the potatoes for 16 days (col. 3, lines 30-35). Also disclosed is dipping the potatoes in an aqueous 2% HP bath, and storage of the potatoes without rot for 2 months (col. 4, lines 5-20). This teaching would further support that the limitation of using intermittent treatment is obvious. Therefore, it would have been obvious to treat at intervals instead of continuously.

Claims 20, 21 and 26 further require various concentrations of HP. However, no patentable distinction is seen in using lesser amounts of HP of 1.5% absent anything new or unexpected because this would depend on the type of product being treated and its degree of contamination. It would have been within the skill of the ordinary worker to use particular amounts depending on the particular foodstuff. Therefore, it would have been obvious to use known amounts of HP or variations thereof in the claimed process.

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Claim 6-9, 12, 13, 14, 15, 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin as applied to the above claims, and further in view of Gomori (4,915,955).

Claim 6 requires particular amounts of the optional metals and claims 9 that the metal is silver and claim 12, that it can be silver. Gomori discloses a concentrate with unlimited shelf life, which can be mixed with HP to make a disinfectant, which includes an acid and a silver salt (abstract). Various amounts of concentrate containing the silver can be mixed with water to within the claimed concentration as in claims 7-8 (col. 3, lines 54-64). Also, Gomori discloses the use of acids such as citric acid (claim 13) because citrate disassociates into an acid and a base (col. 2, lines 37-42). The concentrate can be used to sterilize foodstuffs and animal feed, in preservation of fresh products, which would include potatoes or tubers (col. 4, lines 46-59). Therefore, it would have been obvious to use known metal ions in the process of Martin, because they add to the sterilization characteristics of the composition as disclosed by Gomori.

Claim 14 further requires various mineral acids or organic acids and claim 15 and 57 further require phosphoric acid. Gomori discloses various organic acid stabilizers. No patentable distinction is seen in the use of these other acids instead of peracetic acid absent a showing of unexpected results as they are of course acids too and perform their known functions of affecting the pH of the composition and disinfecting. As to mineral acids phosphoric and nitric acids are disclosed (col. 3, lines 14-30). Therefore, it would have been obvious to use various types of acids in the claimed process.

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Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the above combined references as applied to the above claims, and further in view of Sodifra (FR 2728143).

Claim 13 further requires stabilizers or modifiers. Sodifra discloses the use of acids like hydroethanedisphosphique (French spelling), and other minerals in a disinfectant composition (page 10, first incomplete para.). Therefore, it would have been obvious to use such in the claimed process.

Claims 28-42, 50-53, 44-46, 54, 55, 58, 59 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin as applied to the above claims, and further in view of Dalmasso et al. (5,535,667).

Claim 28 further requires that the foodstuff is treated using a fogger-sprayer that produces microdroplets. Dalmasso et al. disclose the use of a HP vapor at a concentration of 3-4 mg/L and that the vapor does not condense on the product (col. 2, lines 44-50). Nothing is seen that the vapor is not microdroplets at this time. No weight is given to the particular apparatus in a process claim as the process is shown of making microdroplets. Therefore, it would have been obvious to spray using microdroplets.

Concentrations of 0.5-10 mg. HP are disclosed which encompass the HP concentration of claims 29-31. Therefore, it would have been obvious to use amounts within the claimed range in the process of the combined references.

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Claims 27-28, 32-42 are to the size of the microdroplets. Nothing is seen that the apparatus of Dalmasso et al. does not disclose these sizes particularly as the reference states that no free water is present (col. 2, lines 45-50). The use of even smaller sizes as in fumes and smoke are seen as being within the skill of the ordinary worker to vary the size of the droplets. Also, Martin discloses spraying of an aqueous solution. It is seen that the sizes of microdroplets in this reference would also be within the claimed size absent a showing to the contrary, especially as the claims recite "up to 500 microns, etc. Therefore, it would have been obvious to use various sizes of vapor droplets as required.

Claims 50-53 require particular air to liquid volume ratios. Nothing is seen that the spray of Martin does not fall with the claimed ranges as sprays are produced, or in the ranges of Dalmasso who produces a vapor (col. 2, lines 45-50). Therefore, it would have been obvious to use various ratios of air to liquid depending on the type of fog, which is required.

The limitations of claims 44, 45, 46, 54 have been discussed above and are obvious for those reasons and for these further reasons. Claim 44 contains an intended use of effecting Apical Dominance Breakdown (ADB). As the process has been shown the ADB would have been effected. Claims 45 and 46 further require potatoes, which has been shown above and is obvious for those reasons.

The limitations of claims 58, 59 and 60 have also been discussed above and are obvious for those reasons.

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Claim 55 is to the product being treated, which has also been addressed in that Martin treats potatoes. Claim 55 is also a product by process claim. The fact that the procedures of the reference are different than that of applicant is not a sufficient reason for allowing the product-by-process claims since the patentability of such claims is based upon the product formed and not the method by which it was produced. See In re Thorpe 227 USPQ 964. The burden is upon applicant to submit objective evidence to support their position as to the product-by-process claims. See Ex parte Jungfer 18 USPQ 2D 1796.

Therefore, it would have been obvious to make a product treated as claimed.

***Election/Restrictions***

***Response to Amendment***

Applicants' response to the restriction requirement with traverse is noted. This application contains claims not addressed above drawn to an invention nonelected with traverse in Paper No. 11. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

The limitations of group V have been addressed in the office action.

Applicants traverse as to the Special Technical Feature (STF) which is common to all Groups. This is like claiming that because one uses sugar in a process that one can claim numerous inventions.

The difference between imparts storage stability and extends shelf life is well known in the art. Shelf life is generally meant to refer to processed foods, which have to

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be treated to extend their shelf life as opposed to fresh foods. In addition, these are listed separately. If they are the same, it is not known why they are listed separately. It is not agree that for the record that applicants definition of "imparting storage stability extends to shelf life unless this can be pointed to in the specification, nor includes the listing starting with "premature sprouting". Again as to pre and post harvest, it is not seen that this includes anything but these terms, as again, it is not known ~~where~~ <sup>are</sup> they are listed separately, if they are not separate steps. Again definitions should be pointed to in the specification to give basis for a broader definition. (For these reasons, the restriction is made final.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen F. Pratt whose telephone number is 703-308-1978. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Milton Cano, can be reached on (703) 308-3959. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Hp 3-17-03

*H. Pratt*  
HELEN PRATT  
PRIMARY EXAMINER